



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

M-L

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/785,560	02/24/2004	Christopher J. C. Burges	MS305553.1/MSFTP561US	8133
27195	7590	07/12/2007	EXAMINER	
AMIN. TUROCY & CALVIN, LLP 24TH FLOOR, NATIONAL CITY CENTER 1900 EAST NINTH STREET CLEVELAND, OH 44114			COLUCCI, MICHAEL C	
ART UNIT		PAPER NUMBER		
		2609		
MAIL DATE		DELIVERY MODE		
07/12/2007		PAPER		

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)
	10/785,560	BURGES ET AL.
	Examiner Michael C. Colucci	Art Unit 2609

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on _____.
- 2a) This action is **FINAL**. 2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) 1-37 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) Claim(s) _____ is/are allowed.
- 6) Claim(s) 1-37 is/are rejected.
- 7) Claim(s) _____ is/are objected to.
- 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on _____ is/are: a) accepted or b) objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) All b) Some * c) None of:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) Notice of References Cited (PTO-892)
- 2) Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) Information Disclosure Statement(s) (PTO/SB/08)
 Paper No(s)/Mail Date 6/14/2004, 5/26/2005.
- 4) Interview Summary (PTO-413)
 Paper No(s)/Mail Date. _____.
- 5) Notice of Informal Patent Application
- 6) Other: _____.

DETAILED ACTION

Claim Objections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.
2. Claim 1 recites the limitation "a heuristic module to generate a thumbnail of the audio file...", where audio file is not mentioned prior to this limitation. It is unclear as to whether "audio information" is synonymous with audio file or if there is another correlation between the two limiting terms. There is insufficient antecedent basis for this limitation in the claim.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. **Claims 1-4, 7, 8, 10, 14, 16-22 are rejected under 35 U.S.C. 102(b) as being anticipated by Petkovic et al, US 6185527.**

Re claim 1, "A system for summarizing audio information", Petkovic teaches a system and method for summarizing the audio stream, (Abstract).
"analyzer to convert audio into frames", Petkovic teaches rendering the audio streams into intervals, (Abstract).

"fingerprinting component to convert the frames into fingerprints", Petkovic teaches rendering the audio streams into intervals with each interval including one or more segments, (abstract). "each fingerprint based on a plurality of frames", Petkovic teaches the interval having one or more segments.

"A similarity detector", Petkovic teaches the interval matching of heuristically predefined meta patterns, (abstract).

"A heuristic module to generate a thumbnail of the audio file", Petkovic teaches the indexing of an audio stream based on the classification and pattern matching, with only relevant features being indexed, (abstract).

Re claim 2, "heuristic module comprising at least one of an energy component", Petkovic teaches predetermined audio features for a particular range of energy, (abstract). "flatness component to help determine a suitable segment of audio for the thumbnail", Petkovic teaches a range of spectral energy concentration (abstract) as well as a silence test (Fig. 4) which in combination assist in labeling and matching segments of audio.

Re claim 3, "heuristic module is employed to automatically select voiced chorused over instrumental portions", Petkovic teaches audio features determined to represent speech on music, (abstract).

Re claim 4, "energy and flatness component are employed when the fingerprints do not result in finding a suitable chorus", Petkovic teaches that energy and energy concentration tests are employed unconditionally even if a segment match is not found, (abstract and Fig. 3).

Re claim 7, "analyzer computes a set of spectral magnitudes", Petkovic teaches Fourier magnitude spectra stored as a log frequency, (Col. 10 line 31-36).

Re claim 8, "a mean, normalized energy E", Petkovic teaches a mean value over all segments where a normalized spectral energy is given by an equation, (Col. 10 line 37-45). "Dividing a mean energy per frequency component within the frame by the average of that quantity over frames in an audio file", Petkovic teaches of calculations occurring for i^{th} frequencies throughout each segment, (Col. 10 line 21-27). Petkovic also teaches the difference of the audio feature and mean value of that feature divided by the standard deviation of all segments relevant to the i^{th} frequency, (Col. 10 line 37-45).

Re claim 10, "flatness component employs a number added to spectral magnitudes", a number being added is broad and will be construed as part of the summation of squares of frequencies to calculate spectral energy for each frequency, (Col. 10 line 20-27). "Mitigate numerical problems when determining log", Petkovic teaches the processing of particular domain speech segments that reduce errors, (Col. 8 line 37-41).

Re claim 14, "clustering functions further producing sets of clusters", Petkovic teaches intervals that include segments and the grouping of intervals for matching, (abstract).

Claim 16 has been analyzed and rejected with respect to claim 1. Petkovic teaches the implementation of claim 1 stored on a computer readable medium, (Col. 3 line 49-53).

Claim 17 has been analyzed and rejected with respect to claim 1. Petkovic teaches the limitations set forth by claim 17 within claim 1.

Re claim 18, "plurality of audio fingerprints", Petkovic teaches one or more predetermined audio features dependant on intervals dependant on segments, (abstract).

"Clustering the plurality of fingerprints into fingerprint clusters", Petkovic teaches a intervals that include segments and the grouping of intervals for matching, (abstract).

"Creating a thumbnail based in part on the fingerprint clusters", Petkovic teaches the indexing of an audio stream based on the classification and pattern matching, with only relevant features being indexed, (abstract). The audio stream will contain groups of intervals containing segments identified by relevant features (intervals selected that create a thumbnail or an abbreviated version of a set of particular segments).

Re claim 19, "clustering further producing one or more cluster sets, each cluster set comprising fingerprint clusters", Petkovic teaches rendering intervals where intervals include segments and the grouping of intervals for matching, (abstract). A group of intervals implies a plurality of intervals, where groups of intervals are construed as clusters.

Re claim 20, "determining whether a cluster set has three or more fingerprint clusters", Petkovic teaches interval determination where intervals include segments and the grouping of intervals for matching, (abstract). A group of intervals implies a plurality of intervals, where groups of intervals are construed as clusters.

Re claim 21, "based in part on a threshold", Petkovic teaches audio features to find out whether an associated segment equals a respective threshold to determine if predetermined features are exhibited, (Col. 5 line 1-9). "Help determine if two fingerprints belong to the same cluster set", Petkovic teaches the interval matching of heuristically predefined meta patterns based on the classification of intervals, (abstract).

Re claim 22, "clustering operating by considering one fingerprint at a time", Petkovic teaches the incrementing of each segment of audio data", (Fig. 7).

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

The factual inquiries set forth in **Graham v. John Deere Co., 383 U.S. 1, 148 USPQ 459 (1966)**, that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows: (See MPEP Ch. 2141)

- a. Determining the scope and contents of the prior art;
- b. Ascertaining the differences between the prior art and the claims in issue;
- c. Resolving the level of ordinary skill in the pertinent art; and
- d. Evaluating evidence of secondary considerations for indicating obviousness or nonobviousness.

6. **Claims 5, 9, 11, 12, 23, 24, and 34 are rejected under 35 U.S.C. 103(a) as being unpatentable over Petkovic et al, US 6185527 in view of Wells et al (herein after Wells), US PGPUB 20030086341 A1.**

Re claim 5, "a component to remove silence at the beginning and end of an audio clip via an energy-based threshold", Petkovic teaches silence test (Petkovic Fig. 4) correlated to frequency dependent spectral energy concentration applied to a heuristic threshold, (Petkovic Col. 10 line 37-53). However, Petkovic fails to teach the removal of silence at the "beginning and end" of an audio clip. Wells teaches the discarding of time information in the beginning and end of the time sample to minimize distortion, (Wells [0164]). Therefore, the combined teaching of Petkovic and Wells would have rendered obvious a component to remove silence at the start and finish of an audio sample through an energy-based threshold.

Re claim 9, "a component that selects a middle portion of an audio file", Petkovic teaches of audio information where a group of intervals are selected for testing, (Petkovic abstract). A middle portion of an audio file is broad and construed as any portion within the audio stream. "Mitigate quiet introduction and fades appearing in the audio file", Petkovic teaches of silence occurring within an audio stream but fails to teach of avoidance of fades and silent introductions during the segmentation process. Wells teaches of stripping away silence as part of the task of increasing the robustness of the fingerprint, (Wells [0100]). Wells also teaches the editing of fades within an audio stream, (Wells [0057]). Therefore, the combined teaching of Petkovic and Wells would have rendered obvious a component to reduce a quiet introduction and fades in an audio file.

Re claim 11, "frame quantity computed as a log normalized geometric mean of spectral magnitudes", Petkovic teaches multiple segments within an interval (Petkovic

abstract) as well as magnitude spectra stored as a log frequency, (Col. 10 line 31-36). However Petkovic fails to teach a geometric mean included within the flatness component. Wells teaches a geometric mean with equivalency to an arithmetic mean in the log domain, (Wells [0175]). Therefore, the combined teaching of Petkovic and Wells would have rendered obvious a flatness component including a geometric mean function.

Re claim 12, "subtracting a per-frame log arithmetic mean of a per-frame magnitude from the geometric mean", Petkovic teaches normalization, (Col. 10 line 37-45). However Petkovic fails to teach the difference of geometric and arithmetic means. Wells teaches the difference of an arithmetic mean and a geometric mean, (Wells [0217] and following equation). Therefore, the combined teaching of Petkovic and Wells would have rendered obvious the difference of geometric and arithmetic means as part of a normalization process.

Re claim 23, "determining a parameter (D) describing how closely spread clusters are, temporally, throughout an audio file", Petkovic teaches groups of intervals of segments from an audio stream, (Petkovic abstract). However Petkovic fails to teach of the determination of how evenly spread clusters are. Wells teaches the values within fingerprints are a set based on the observed spread of those values across all songs in the sample set, (Wells [0231]). By knowing the spread, one can determine how even the spread is. Therefore, the combined teaching of Petkovic and Wells would have rendered obvious a parameter that determines the spread of the group of intervals (clusters) in an audio stream.

Claim 24 has been analyzed and rejected with respect to claim 23. A temporal spread is broad as to be construed as a "spread" within a cluster as the one described in claim 23.

Re claim 34, "automatically fading a beginning or an end of an audio thumbnail", Petkovic teach of relevant features within an interval that give a unique identity. However Petkovic fails to teach fading at the beginning and end of an audio stream. Wells teaches of stripping away silence as part of the task of increasing the robustness of the fingerprint, (Wells [0100]). Wells also teaches the editing of fades within an audio stream, (Wells [0057]). Therefore, the combined teaching of Petkovic and Wells would have rendered obvious fading at the beginning or end of an interval.

7. Claims 6, 13, 15, and 25-30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Petkovic et al, US 6185527 in view of Nichogi et al., (herein after Nichogi), US PGPUB 20030021472 A1.

Re claim 6, "Average Euclidean distance from each fingerprint to other fingerprints for an audio clip is one", Petkovic teaches normalization (Col. 4 line 62-67) but fails to teach of normalization through the use of a Euclidean distance. The use of a normalization value of one is broad. When read in light of the specification, any constant value can be used to evenly space fingerprints. Petkovic teaches speech intervals that utilize the use of "one" as a constant, (Col. 4 line 52-55). Nichogi teaches the use of a Euclidean distance, (Nichogi [0078]). Therefore, the combined teaching of

Petkovic and Nichogi would have rendered obvious a fingerprint component that uses normalization where a Euclidean distance has a value of one.

Re claim 13, "a clustering function producing clusters of similar functions", Petkovic teaches groups of intervals and matching of intervals that have similarities, (Petkovic abstract). However Petkovic fails to teach a clustering function. Nichogi teaches an operation where the determination, fixing, and storing of clusters is performed, (Nichogi Fig. 3). Therefore, the combined teaching of Petkovic and Nichogi would have rendered obvious a clustering function producing clusters with similarities.

Re claim 15, "normalized Euclidean distance from F1 to F2 below a first threshold", Petkovic teaches normalization (Col. 4 line 62-67) but fails to teach of normalization through the use of a Euclidean distance. Petkovic teaches audio features to find out whether an associated segment equals a respective threshold to determine if predetermined features are exhibited, (Col. 5 line 1-9). However Petkovic fails to teach two conditions of being above or below a threshold. Nichogi teaches a Euclidean distance between pixels as well the condition when a distance is greater than a threshold value, (Nichogi Fig. 21). "A temporal gap in an audio between where F1 is computed and where F2 is computed is above a second threshold", Petkovic teaches a silence test where segments will be passed through one at a time (Petkovic Fig. 4). There will inevitably be a time gap between each segment while the code executes. However Petkovic fails to teach the second condition of the distance being below a threshold value. Nichogi teaches a condition when a distance is smaller than a threshold value, where quantized vectors are effected, (Nichogi Fig. 21). Therefore, the

combined teaching of Petkovic and Nichogi would have rendered obvious a Euclidean distance component that evaluates the distance between two fingerprints to be above or below a certain threshold.

Re claim 25, "normalizing a song to have duration of 1", when read in light of the specification, the quantity t-sub-l minus t-sub-(i-1) is a probability. Therefore the constant value of 1 used in the subtraction operation in the equation is implied since a probability must remain at greatest value "1". Petkovic teaches the use of a confidence level probability, (Col. 8 line 54-55).

"Setting a time position of an ith cluster be t-sub-l", Petkovic teaches of calculations occurring for ith frequencies throughout each segment, (Col. 10 line 21-27).

Petkovic teaches of groups of intervals, (Petkovic, abstract). The equation in claim 25 reveals a sum of squares where the squared term refers to a probability. This summation is the square of a Euclidean distance. Petkovic fails to teach a Euclidean distance. However Nichogi teaches a Euclidean distance, (Nichogi [0078] and Equation 3 [0089]). Subtracting the squared Euclidean from 1 still produces a probability. The equation in claim 25 is the equation of Nichogi's ([0089]) adjusted to be a probability. Therefore, the combined teaching of Petkovic and Nichogi would have rendered obvious a parameter measured through the use of a probability-based squared Euclidean equation.

Re claim 26, "an offset and scaling factor", Petkovic teaches the use of weighting to select only specific portions of the speech, (Petkovic Col. 3 line 18-24). "maximum value of 1 and minimum value of 0", The combined teaching of Petkovic and Nichogi

teaches the use of a confidence level probability, (Col. 8 line 54-55). The combined teaching of Petkovic and Nichogi also teaches the use data being given the range (0,1) during processing, (Petkovic Col. 10 line 1-7).

Re claim 27, "determining a mean spectral quality for fingerprints in a set", The combined teaching of Petkovic and Nichogi teaches Fourier magnitude spectra stored as a log frequency, (Petkovic Col. 10 line 31-36).

Re claim 28, "spectral flatness" and a "parameter D, are combined", the combined teaching teaches a silence test (Petkovic Fig. 4) correlated to frequency dependent spectral energy concentration applied to a heuristic threshold, (Petkovic Col. 10 line 37-53). "Determine a best cluster set from among a plurality of cluster sets", the combined teaching teaches that the most relevant data features of a segment are indexed, (Petkovic abstract).

Claim 29 has been analyzed and rejected with respect to claim 28. Claim 29 teaches the limitations set forth in claim 28, where the external value of the parameter is synonymous with the parameter itself.

Re claim 30, "best fingerprint within the cluster is determined", the combined teaching teaches that the most relevant data features of a segment are indexed, (Petkovic abstract). "Surrounding audio, of duration about equal to a duration of an audio thumbnail", surrounding audio is broad and is construed as audio within the interval with similar features, where the combined teaching teaches of the grouping of intervals and pattern matching them, (Petkovic abstract). "Spectral energy and flatness", the combined teaching teaches predetermined audio features for a particular

range of energy, (abstract). The combined teaching also teaches a range of spectral energy concentration (abstract) as well as a silence test (Fig. 4) which in combination assist in labeling and matching segments of audio.

8. Claim 31 is rejected under 35 U.S.C. 103(a) as being unpatentable over Petkovic et al, US 6185527 in view of Foote, US 6542869.

Re claim 31, "a longest section of audio within an audio file that repeats in the audio file", Petkovic teaches an audio stream and intervals containing segments, all extracted from the audio stream, (Petkovic abstract). However Petkovic fails to teach a longest section of audio repeating. Foote teaches points of change in music and segment boundaries such as a chorus. The longest repeating section of audio, particularly music, implies a chorus. Therefore, the combined teaching of Petkovic and Foote would have rendered obvious the determination of a chorus or longest repeating segment of audio from an audio stream.

10. Claim 32 is rejected under 35 U.S.C. 103(a) as being unpatentable over Petkovic et al, US 6185527 in view of Nichogi et al., (herein after Nichogi), US PGPUB 20030021472 A1 and further in view of Wells et al (herein after Wells), US PGPUB 20030086341 A1.

Re claim 32, "rejecting clusters that are close to the beginning or end of a song", Petkovic teaches groups of intervals but fails to teach the removal of silence at the "beginning and end" of an audio clip. Wells teaches the discarding of time information

in the beginning and end of the time sample to minimize distortion, (Wells [0164]).

Therefore, the combined teaching of Petkovic and Wells would have rendered obvious the removal of intervals close to the beginning and end of an audio stream.

"which energy falls below a threshold for any fingerprint in a predetermined window", Petkovic teaches the segmentation of audio data into intervals (Petkovic abstract). Petkovic also teaches predetermined audio features for a particular range of energy, (abstract). However Petkovic fails to teach two conditions of being above or below a threshold. Nichogi teaches a Euclidean distance between pixels as well the condition when a distance is greater than a threshold value, (Nichogi Fig. 21).

Therefore, the combined teaching of Petkovic and Nichogi would have rendered obvious the rejection of clusters when energy levels fall below a threshold.

"selecting a fingerprint having a highest average spectral flatness", Petkovic teaches a range of spectral energy concentration (abstract) as well as a silence test (Fig. 4).

9. Claims 33, 35, and 36 are rejected under 35 U.S.C. 103(a) as being unpatentable over Petkovic et al, US 6185527 in view of Kanevsky et al, US 6434520 (herein after Kanevsky).

Re claim 33, "generating a thumbnail by specifying time offsets", Petkovic teaches the indexing of an audio stream based on the classification and pattern matching, with only relevant features being indexed, (abstract). However Petkovic fails to teach time offsets within an audio stream. Kanvesky teaches of windows within a

stream of vectors that are shifted over time, (Kanevsky, Col. 4 line 4-15). Therefore, the combined teaching of Petkovic and Kanevsky would have rendered obvious a time offset or time shift within the audio stream.

Re claim 35, "based on a log spectrum computed over a small window", Petkovic teaches Fourier magnitude spectra stored as a log frequency, (Col. 10 line 31-36). "processing an audio file in at least two layers", Petkovic fails to teach two layers. Kanevsky teaches two adjacent sliding windows, (Kanevsky Col. 4-28). "second layer operates on a vector computed by aggregating vectors produced by the first layer", Petkovic fails to teach this limitation. Kanevsky teaches two adjacent sliding windows operating on the stream of vectors where the feature vectors of each window are clustered, (Kanevsky Col. 4-28). Therefore, the combined teaching of Petkovic and Kanevsky would have rendered obvious two windows or layers that add all vectors produced.

Re claim 36, "providing a wider temporal window in a subsequent layer than a proceeding layer", the combined teaching teaches alternatives for longer terms generated by the speech recognition engine, (Petkovic abstract). A longer term implies a longer window in time to extract segments of audio into intervals. However Petkovic fails to teach of two layers within an audio file. Kanevsky teaches two adjacent sliding windows, (Kanevsky Col. 4-28). Therefore, the combined teaching of Petkovic and Kanevsky would have rendered obvious a wider temporal window within the range of two layers or windows.

11. Claim 37 is rejected under 35 U.S.C. 103(a) as being unpatentable over Petkovic et al, US 6185527 in view of Kanevsky et al, US 6434520 (herein after Kanevsky) and further in view of Wells et al (herein after Wells), US PGPUB 20030086341 A1.

Re claim 37, "at least one of the layers to compensate for time misalignment", the combined teaching teaches two layers, (Kanevsky Col. 4-28). However the combined teaching fails to teach time misalignment compensation. Wells teaches the distance between fingerprints and the correlated matching where the space between fingerprints is partitioned into non-overlapping regions, (Wells [0192]). Therefore, the combined teaching of Petkovic, Kanevsky, and Wells would have rendered obvious compensation for time misalignment.

Examiner's Note

The referenced citations made in the rejection(s) above are intended to exemplify areas in the prior art document(s) in which the examiner believed are the most relevant to the claimed subject matter. However, it is incumbent upon the applicant to analyze the prior art document(s) in its/their entirety since other areas of the document(s) may be relied upon at a later time to substantiate examiner's rationale of record. A prior art reference must be considered in its entirety, i.e., as a whole, including portions that would lead away from the claimed invention. W.L. Gore & associates, Inc. v. Garlock, Inc., 721 F.2d 1540, 220 USPQ 303 (Fed. Cir. 1983), cert. denied, 469 U.S. 851 (1984). However, "the prior art's mere disclosure of more than one alternative does not constitute a teaching away from any of these alternatives because such disclosure does

not criticize, discredit, or otherwise discourage the solution claimed...." In re Fulton, 391 F.3d 1195, 1201, 73 USPQ2d 1141, 1146 (Fed. Cir. 2004).

Contact

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael C. Colucci whose telephone number is (571)272-1847. The examiner can normally be reached on 7:30 am - 5:00 pm , alt. Fridays. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vu Le can be reached on (571)-272-7332. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Michael Colucci Jr.
Patent Examiner
AU 2626
(571)-270-1847
Michael.Colucci@uspto.gov

VU LE
SUPERVISORY PATENT EXAMINER